

DIVISION 13 – SWIMMING POOL RECREATION EQUIPMENT

SECTION 13157 – PLAY STRUCTURE

PART 1 - GENERAL

Division 1 and the General Conditions apply to all work of this Section.

Description:

1) Work Included:

- a) Furnish and install water play equipment as indicated on the Drawings, specified herein, and as necessary for proper completion including, but is not necessarily limited to:
 - i) Complete above ground water play structure.
 - ii) All above ground piping and manifolds.
 - iii) Any waterslides that are a part of the play structure.
 - iv) Installation supervision, ride testing and certification.
 - v) Labor, materials and equipment to complete the installation.
 - vi) Operations and Maintenance manuals.

2) Related Work Specified Elsewhere:

- a) All demolition and repairs to decks, fences and landscaping.
- b) Construction of concrete drilled piers or spread footer foundations complete with anchor bolts and embeds, concrete columns and flat work as required.
- c) All electrical works, buildings, permits and modifications if any to the pool.
- d) Supply and installation of mechanical equipment and related piping.

3) Acceptable Manufacturers:

- a) Acceptable manufacturer: Whitewater West Industries Ltd., 3040 Riverside Drive, Suite 123, Columbus, OH, 43221. Telephone 1-800-775-4337. Contact: Adam Heuss

4) Quality Assurance:

- a) Qualifications of Suppliers and Personnel:
 - i) The water play equipment supplier shall have not less than five (5) years experience in the design and fabrication of similar play structures.
 - ii) The water play equipment supervisor shall have not less than five (5) years experience in the erection of similar structures.
 - iii) The water play equipment supplier shall carry a minimum of \$2,000,000 in General Liability and Product Liability Insurance. If required, the supplier shall submit certificates with their bid.
 - iv) Product quality is of utmost importance. The supplier shall submit evidence of written Quality Assurance Program with their bid.
- b) Codes and Standards:
 - i) The water play equipment shall, comply with pertinent recommendations contained in:
 - ii) Applicable sections of ASTM 1487-98 "Standard Consumer Safety Performance Specification for Playground Equipment for Public Use".
 - iii) Water slide flumes shall comply with "WWA Considerations for Operating Safety", 1989, as published by the World Waterpark Association.
 - iv) "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings" of the American Institute of Steel Construction.
 - v) "Code for Welding in Building Construction" of the American Welding Society.
 - vi) CSA W47.1 "Certification of Companies for Fusion Welding of Steel Structures".

- vii) CSA W 59 "Welded Steel Construction".
- viii) "Specifications for Architecturally Exposed Structural Steel" of the American Institute of Steel Construction.
- ix) "ASTM" requirements for all steel components, of the American Society of Testing Materials.

5) Submittals:

- a) Drawings:
 - i) Within thirty (30) days after award of Contract, and before any materials are delivered to the jobsite, submit the following drawings to the Architect for approval:
 - (1) Dimensioned plan and elevation drawings of the structure.
 - (2) Pool/wet pad dimensional requirements drawing.
 - (3) Foundations plans and details as required.
 - (4) Mechanical schematic.
 - (5) Ride theme drawings, if applicable.
 - ii) The supplier shall certify to the Architect that the pool dimensions and depth are acceptable and compatible with safety standards for the supplier's designed product.

6) Guarantee / Warranty:

- a) All work of this Section shall be warranted against all defects of material and/or application for a period of one (1) year from date of acceptance. Any failures that may occur within this warranty period, due to defective installation and/or materials, shall upon written notification of such failure be immediately repaired or replaced.

PART 2 - PRODUCTS

1) Water Play System: AquaPlay 300

- a) The Participatory Water Play System will be suitable for installation in public swimming facilities and specifically designed for use by children and adults.
- b) Materials
 - i) All materials are structurally sound and suitable for safe play. Durability is insured on all steel components by the use of proven coatings such as galvanization. Main piping of the structure is of schedule 40 steel pipe.
 - ii) All parts not required to be structural may be fabricated from PVC or fiberglass and suitably protected from ultraviolet deterioration.
 - iii) All nozzles (if required) are stainless steel, brass, or PVC.
- c) Manifold System
 - i) The play system has integrated into its overall design a manifold system for regulating the water flows and pressures to each individual effect. The manifold is constructed of PVC, steel or fiberglass and utilizes PVC ball valves.
 - ii) The manifold system is accessible for adjustment and each valve will be permanently labeled as to the location it controls.
- d) Hardware
 - i) Primary structural fasteners (bolts, nuts, washers and screws) are stainless steel or galvanized. Secondary fasteners are stainless steel where required (slides and skirting). No bare steel hardware is allowed.
- e) Decks and Stairs
 - i) All decks and stairs are fiberglass and have an integral non-slip finish on the exposed surface. Each fiberglass panel is structurally capable of supporting a minimum load of 489kg/m₂ (100 lbs/ft₂).

- f) Slides
 - i) Slides are of high quality fiberglass with the body of the flume having a minimum 3/16" thickness and joint flanges a minimum 1/2" thick. Premium quality isothphalic resins are to be used throughout. Interior of waterslide to have a minimum 0.020 inches thick gelcoat. Exterior of slides are to be protected by a flood coat of gelcoat or urethane. Slides shall have integral run-out lanes.
- g) Crawl Tunnels
 - i) The tunnel body is 685mm (27") or 610mm (24") or 813mm (32") diameter, fabricated from fiberglass or molded polyurethane.
- h) Side Panels
 - i) All areas below platforms and stairs less than 1.5m - 1.8m (5' - 6') high are completely sealed off from the public and secured with a 9.5mm (3/8") reinforced PVC or fiberglass panels. All panels are ultra-violet protected with a polyurethane or gelcoat finish.
- i) Valves
 - i) Main operating valves: All operational wheel valves are fabricated of stainless steel and EPDM seat or 100% PVC.
 - ii) Wheels and connecting hardware is specially fabricated so as to provide minimum opportunity for injury during rotation.
 - iii) All rope operated valves are self-closing with stainless steel or brass bodies and/or operating parts. The valves as well as the supply pipe are capable of withstanding a 79kg (175 lb) live load.
- j) Waterguns
 - i) All waterguns are manufactured with trigger or handle operated mechanisms so water flow may be controlled completely by the operator. This operating mechanism is encased and isolated inside of a sealed galvanized steel tube.
 - ii) The watergun is mounted on a swivel base that will allow the gun to travel approximately 60° horizontally and 45° vertically.
- k) Finishing
 - i) All exposed galvanized metal and PVC components are first prepped and primed with two coats primer then painted with a top coat which is chemical and ultraviolet resistant. This topcoat provides a high gloss finish that is extremely hard and damage resistant.

2) Mechanical System:

- a) The mechanical system is supplied and installed by the mechanical contractor and shall include a below grade mechanical system providing 800 gpm to the play equipment system.
- b) Pump electrical connections require 480V 3 phase power. Hook-up, switches, motor starter are by others.

PART 3 - EXECUTION

1) Surface Conditions:

- a) Inspection:
 - i) Prior to installation of the work of this Section, carefully inspect the installed work of other trades and verify that all such work is complete to the point where this installation may properly commence.

2) Discrepancies:

- a) In the event of discrepancy, immediately notify the Architect.

- b) Do not proceed with fabrication or installation in areas of discrepancy until all such discrepancies are fully resolved.

3) Installation of Foundations:

- a) Foundations, where required, shall be installed in strict accordance with the approved Shop Drawings.

4) Welding:

- a) General:
 - i) For details of joints, comply with requirements for AWS joints accepted without qualification tests.
 - ii) Use ASTM A-233, E-70XX series electrodes.
 - iii) Follow applicable sections of AWS specifications.
- b) Types of Welds:
 - i) Unless otherwise noted:
 - (1) Make all fillet welds 1/4 inch minimum.
 - (2) Make all butt welds full penetration welds.

5) Erection:

- a) General:
 - i) Erect all equipment in accordance with the approved Shop Drawings and all pertinent regulations and standards.

6) Tolerance:

- a) Align all structural steel straight, plumb and level with a tolerance of 1 in 500.

7) Steel Finishes:

- a) Any field welds or scarred surfaces shall be cleaned and cold galvanized with zinc rich paint and then primed and painted in accordance with the play equipment manufacturers specifications.

8) Clean-Up:

- a) Upon completion of the work of this Section, immediately remove all debris and rubbish occasioned by this work to the approval of the Architect and at no additional cost to the Owner.

END OF SECTION

